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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/046,004 04/09/93 ENGELHARDT

18N1/1004

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D ENZ5(D6)(C1)	
EXAMINER	
HOUTTEMAN, S	
ART UNIT	PAPER NUMBER

17

1807
DATE MAILED:

10/04/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 4/9/93 6/23/94 + 4/22/94 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☒ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

1. ☒ Claims 704 - 233 are pending in the application.

Of the above, claims 208, 210-214, 217-224 + 228-233 are withdrawn from consideration.

2. ☐ Claims have been cancelled.

3. ☐ Claims are allowed.

4. ☒ Claims 704-207, 209, 215, 216 + 225-227 are rejected.

5. ☐ Claims are objected to.

6. ☐ Claims are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on . Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on , has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed , has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. ; filed on .

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

FILED NO. ENZ5(D6)(C1)
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EXAMINER'S ACTION

Serial No. 08/046,004
Art Unit 1807

OCT 10 X 1994
RONALD C

-2-

15. Applicant's election with traverse of group I, claims 204-227 and 233; and, species wherein the Sig component comprises and enzyme in Paper filed 6/23/94 is acknowledged. Claims 204-207, 209, 215, 216 and 225-227 read on this species. Claims 228-232 and claims 208, 210-214, 217-223 and 233 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected group and a non-elected species.

16. The traversal is on the ground(s) that the search for both groups would necessitate a review of the art - at least in part for the other group. This is not found persuasive because a burden is shown by the classification of the groups into different areas. The composition would also be searched in classes such as 514/44 (compositions comprising nucleic acids) which would not be necessary for the nucleic acid search.

The requirement is still deemed proper and is therefore made FINAL.

17. The Information Disclosure Statement filed on 8/22/94 contains references which were not considered because no copy was furnished.

18. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to

enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, because the specification, as originally filed, does not provide support for the invention as is now claimed. Support for claims 204-207, 209, 215, 216 and 225-227 was not pointed out nor was it found in the original disclosure. For example, claim 216, which depends ultimately from claim 204, recites a nucleotides wherein Sig comprises several enzymes. In the original disclosure, the claim reciting these enzymes, claim 197, was dependant from a very different base claim.

19. Claims 204-207, 209, 215, 216 and 225-227 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

20. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention

were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

21. Claims 204-207, 209, 215, 216 and 225-227 are rejected under 35 U.S.C. § 103 as being unpatentable over Kourilsky (GB 2 019 408) Oct 31, 1979.

Claims 204 is drawn to nucleotides having a phosphate moiety, a sugar moiety, a base and a "sig" moiety. Claims 204-205-207, 209, 215, 216 and 225-227 further limits claim 204 to recite a phosphate covalent bond, wherein Sig is at least three carbon atoms, and wherein Sig is an enzyme, for example B-galactosidase.

Kourilsky teaches a nucleotide, which contains phosphate, sugar and base moieties, which is chemically coupled to the enzyme β galactosidase (Kourilsky p. 2, lines 2-3 and 15). The claims differ from Kourilsky in the recitation of the phosphate linkage. However, Kourilsky teaches "It goes without saying that it is possible to resort to other chemical modifications of the probes . . . (p. 2, lines 44-46)," and "the chemical modification must be such that it does not prevent the possible subsequent hybridization of the probe with the DNA (p. 2, lines 15-16)." It


would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to couple the β galactosidase to the phosphate moiety for the expected benefit of freeing the base moiety for hybridization.

22. Papers relating to this application may be submitted to Group 180 by facsimile transmission. Papers should be faxed to Group 180 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax center numbers are (703) 305-3014 or (703) 308-4227.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Houtteman whose telephone number is (703) 308-3885. The examiner can normally be reached on Tuesday-Friday from 8:30 AM - 6:00 PM. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Margaret Parr, can be reached at (703) 308-2454.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.



Scott Houtteman
October 3, 1994

MARGARET PARR
SUPERVISORY PATENT EXAMINER
GROUP 1800